



# Missouri Career and Technical Education Strategic Plan

FY 2025-2027  
July 2024



# Missouri Career and Technical Education (CTE)

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Show Me Learning that Works

# CTE®

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# PROCESS

The Missouri Department of Elementary and Secondary Education (DESE) Career and Technical Education (CTE) Strategic Plan outlines priority areas that align with DESE's overall strategic plan, complete with measurable goals, timelines, and responsible stakeholders. The CTE Advisory Council, composed of industry and educational partners, worked collaboratively with DESE's Office of College and Career Readiness CTE staff, to develop the fiscal year (FY) 2025-27 CTE Strategic Plan.

## OVERVIEW

DESE's overall strategic plan identifies four priority areas: Early Learning; Literacy; Success Ready Students & Workforce Development; and Teacher Recruitment & Retention. The CTE Strategic Plan is a subset of this plan, residing in the priority areas of Success-Ready Students & Workforce Development and Teacher Recruitment & Retention. Like DESE's strategic plan, the CTE plan highlights the accomplishments and opportunities for real-world learning and teacher recruitment and retention.

The CTE Strategic Plan priority areas define Success-Ready Students & Workforce Development as preparing students with the necessary skills, competencies, and attributes to excel in Missouri's unique workforce landscape—including an approach that ensures academic success—and development of skills such as critical thinking, problem-solving, collaboration, and adaptability. For secondary students, CTE is offered in more than 440 high schools (public and charter) and 57 area career centers. Access for CTE postsecondary students is located in 13 two-year institutions and seven four-year institutions.

Stakeholders representing secondary and postsecondary CTE administrators and DESE CTE coordinators established state-determined performance levels (SDPLs) for Perkins accountability measures that were provided for public comment and submitted to the United States Department of Education on May 10, 2024. The new SDPLs establish a baseline year, FY 2024—Program Year 2024-25—and cover the federal accountability period of FY 2024-26. The establishment of the new SDPLs were considered as part of the CTE Strategic Plan.

In the winter of 2024, the DESE Office of College and Career Readiness CTE section organized a task force to study and recommend changes to the Code of State Regulations rule for CTE teacher certification. In February 2024, the task force's recommendations were presented to the Missouri Advisory Council of Certification for Educators, and the Missouri Advisory Board for Educator Preparation and subsequently presented to the State Board of Education in May 2024. The new changes, following a public comment period and acceptance by the State Board of Education, will allow more flexibility in securing qualified CTE instructors, creating a greater opportunity for CTE access and program stability among Missouri local education agencies (LEAs).



# Missouri CTE Today: Facts and Figures from the 2022-23 Academic Year



## Career and Technical Education in Missouri

### Total CTE Participation

**186,375**

Secondary

**53,847**

Postsecondary

**718**

Adult (full-time)



**13,053\*** 

Missouri high school students received an industry-recognized certificate or credential

\*includes students who earned at least one stackable credential

**5,257** 

Missouri high school graduates earned the CTE Certificate



## Membership in Missouri Career & Technical Student Organizations (CTSOs)



**2022-23**

**26,830**

Future Farmers of America (FFA)

**13,053**

Future Business Leaders of America (FBLA)

**11,700**

SkillsUSA

**8,941**

Family, Career & Community Leaders of America (FCCLA)

**7,199**

DECA

**3,731**

Future Health Professionals (HOSA)

**2,021**

Technology Student Association (TSA)

Missouri career and technical education (CTE) opportunities are preparing young people and adults for the job market and/or further education. These programs combine academics and job-specific skill training to assist in narrowing the skills gap. Career and technical education programs are offered in:

- Agriculture
- Business
- Health Sciences
- Family Consumer Sciences & Human Services
- Marketing
- Skilled Technical Sciences
- Technology & Engineering



of all high school students in Missouri enrolled in at least one career and technical education program in 2022-23



**353**

**Registered Youth Apprentices**

Industry-driven, high quality, earn and learn apprenticeship



## Mission

CTE exists to provide relevant and meaningful opportunities for students so they have the skills, knowledge, and experiences necessary to support needs of business and industry.

## Vision

Creating Career Ready Missourians

## Values

Student-Focused  
Relevancy  
Quality  
Partnership  
Innovation  
Integrity

## Our Stakeholders

Students  
Parents/Guardians  
Communities  
Local Education Agencies  
Business and Industry  
Higher Education  
Local, State, and Federal Government

## Strategic CTE Priority Areas and Goals

### CTE Priority Area 1: **Student Achievement**

Improve overall student achievement in CTE.

### CTE Priority Area 2: **Marketing, Image, and Partnership**

Increase CTE enrollment, business and industry partnerships, and the perception of CTE with all stakeholders.

### CTE Priority Area 3: **Business and Financial Operations**

Increase the amount of funding appropriated by the legislature based upon the most recent capital needs survey of area career centers, comprehensive high schools, and community college programs to better serve students by FY 2027.

### CTE Priority Area 4: **Teacher Recruitment and Retention**

Increase the number of new CTE teachers remaining in the field at least five years by 2 percent annually.



# CTE Priority 1: Student Achievement

An important component of Missouri CTE is preparing Missouri's young workforce for life beyond high school that is meaningful, productive, and successful. Academic and technical skill attainment through Missouri CTE programs and pathways can lead to postsecondary opportunities while meeting industry demands for a strong workforce.

## Goal: Improve Overall Student Achievement in CTE

Strategy	FY 25	FY 26	FY 27
<b>Strategy 1</b> Increase percentage of industry-recognized credentials (IRCs) earned by CTE concentrators.	Increase by 10.5% over FY 24.	Increase by 1.5% over FY 25.	Increase by 4% over FY 26.
<b>Strategy 2</b> Increase graduation rate of CTE concentrators.	Increase by .06% over FY 24.	Increase by .02% over FY 25.	Increase by .03% over FY 26.
<b>Strategy 3</b> Increase placement percentage of CTE graduates.	Increase by .1% over FY 24.	Increase by .1% over FY 25.	Increase by .1% over FY 26.
<b>Strategy 4</b> Increase percentage of graduates earning the CTE certificate.	Increase by 4% over actual CTE certificates earned in FY 24.	Increase by 3.33% over actual CTE certificates earned in FY 25.	Increase by 3.25% over actual CTE certificates earned in FY 26.
<b>Strategy 5</b> Calculate and monitor the percentage of students completing a work-based learning (WBL) experience such as Registered Youth Apprenticeships (RYAs).	Develop a measurement for WBL within the Core Data system.	Initial reporting of WBL experiences within the DESE Missouri Comprehensive Data System.	Establish growth goal based upon FY 26 data.

### **DESE and the CTE Advisory Council will:**

- Examine student achievement of all populations by the measures of success as indicated.
- Analyze program offerings, enrollment (including proportionate special population subgroups), and curriculum, providing necessary adjustments based on reported data.



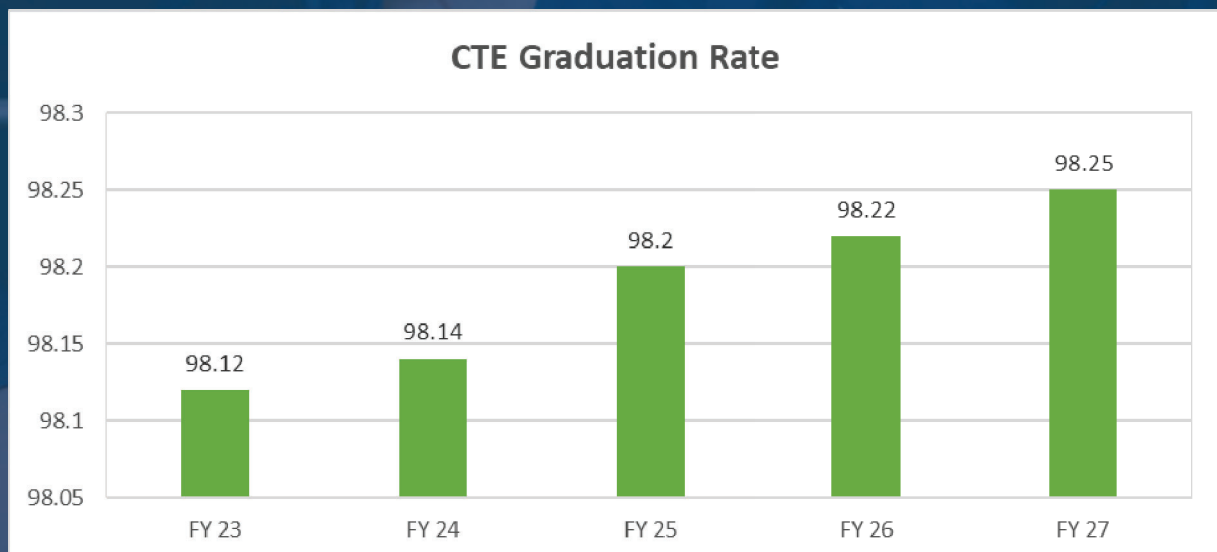
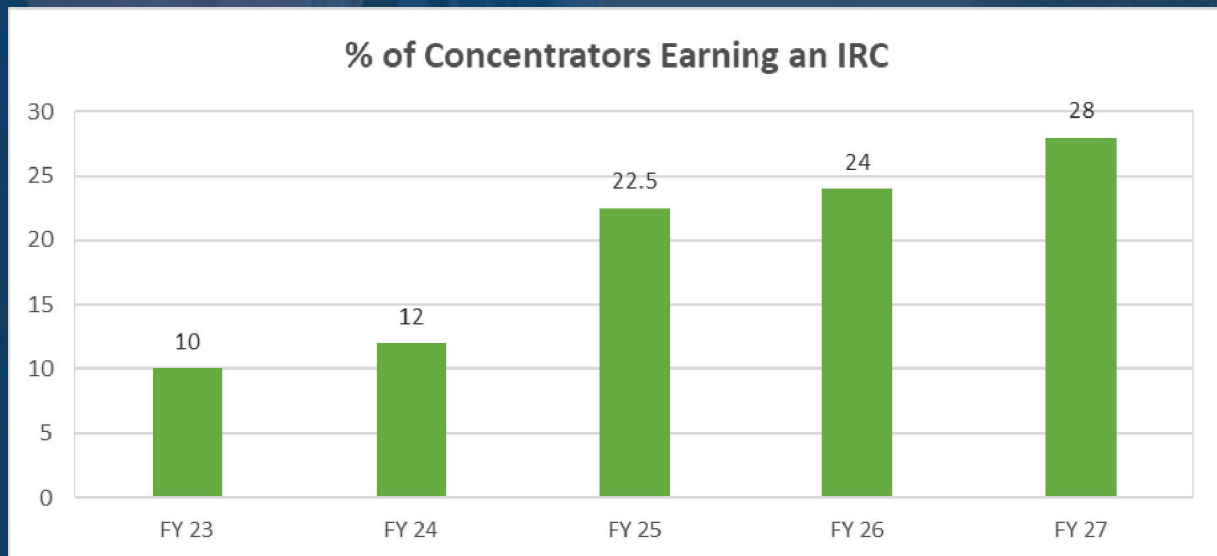
### LEAs will:

- Evaluate and seek additional offerings for IRCs that align with new and existing CTE programming.
- Examine application and enrollment procedures to align with the "Missouri High School Career and Technical Education Admissions Best Practices Guide."
- Encourage greater student participation in earning the CTE Certificate.
- Report student WBL experience through the Core Data System.

### Statewide CTE Partners will:

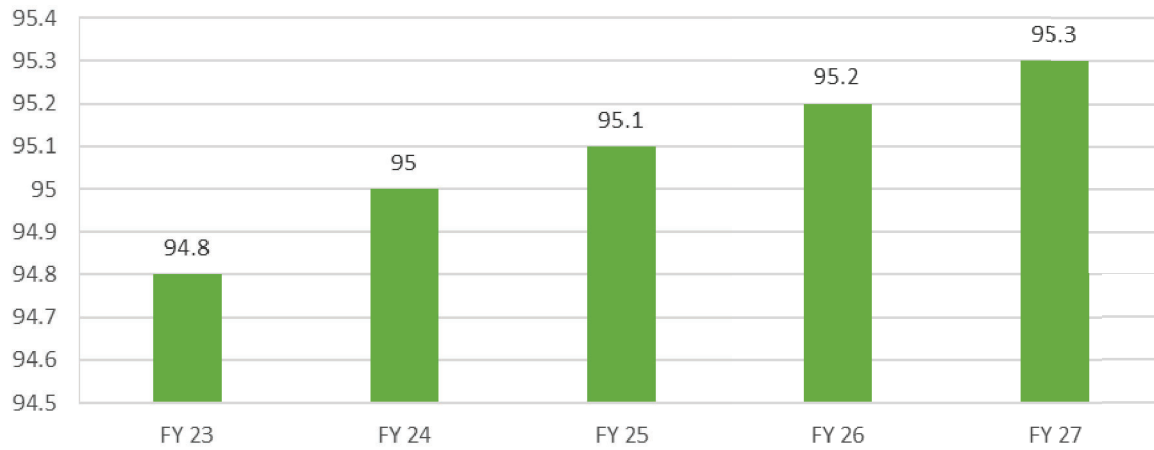
- Encourage LEAs to provide meaningful IRCs for students who earn the CTE Certificate.

## Historical CTE Trends

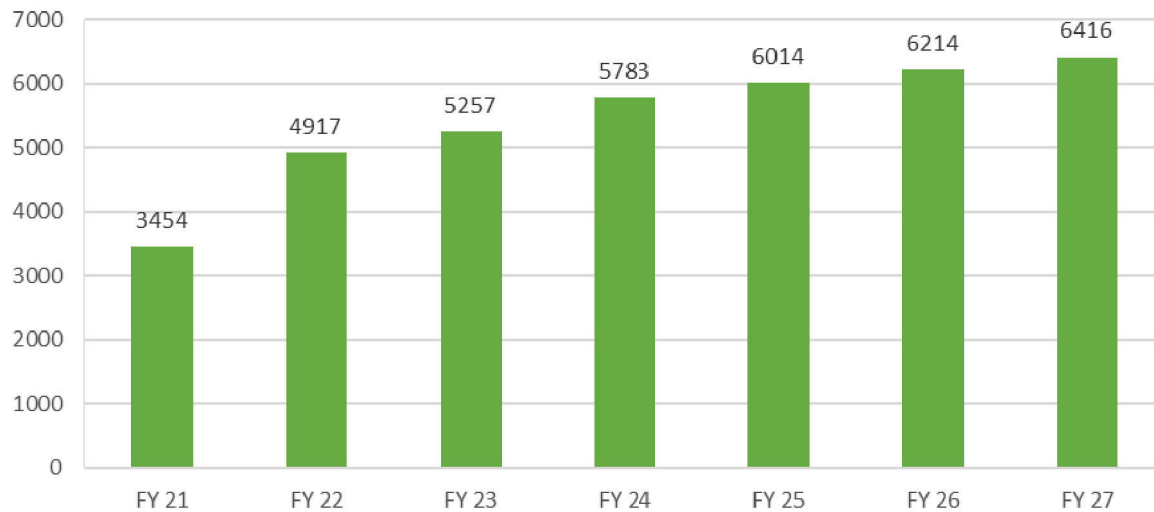




### CTE Placement Rate



### CTE Certificates Earned



### CTE Registered Youth Apprenticeships





# CTE Priority 2: Marketing, Image, and Partnership

Changing the perception of CTE is necessary to reach a broader audience. Opportunities are growing as partners become more aware of CTE and its benefits through career pathways. Attracting students to these pathways leads to career advancement within the labor workforce.

**Goal: Increase CTE enrollment, business and industry partnerships, and the perception of CTE with all stakeholders.**

Strategy	FY 25	FY 26	FY 27
<b><u>Strategy 1</u></b> Increase CTE enrollment.	Continue to collect CTE enrollment from LEAs as reported for Perkins accountability.	Increase CTE enrollment by 1% over previous year as reported in the annual Missouri CTE Fact Sheet.	Increase CTE enrollment by 1% over previous year as reported in the annual Missouri CTE Fact Sheet.
<b><u>Strategy 2</u></b> Increase DESE CTE approved secondary programs compared to previous year.	Consider FY 24 data and increase DESE CTE secondary program approvals by 1% of the previous year.	Increase DESE CTE secondary program approvals by 1% from the previous year.	Increase DESE CTE secondary program approvals by 1% from the previous year.
<b><u>Strategy 3</u></b> Increase CTE industry partnerships through collaborative events.	Develop a process for LEAs to report CTE student WBL opportunity partnerships (internships, RYA, etc.).	LEAs submit in June to DESE the number of CTE partnerships resulting in student internships and RYA opportunities.	Increase CTE partnerships by 1%.
<b><u>Strategy 4</u></b> Measure and communicate the CTE perception survey to internal and external stakeholders.	Conduct CTE perception survey and analyze the results.	Develop an action plan to address the survey findings.	Conduct CTE perception survey and analyze the results.



### **DESE and the CTE Advisory Council will:**

- Create and publish Show-Me Learning That Works promotional and marketing CTE videos.
- Provide and increase teacher externships.
- Assist statewide CTE partners with CTE exploratory events.
- Use the CTE perception survey that provides individuals an opportunity for input and communicate the survey results to the public.
- Explore ways to increase the value of the CTE Certificate to students who qualify/earn it.
- Create an interactive map that hyperlinks to all area career centers' websites.

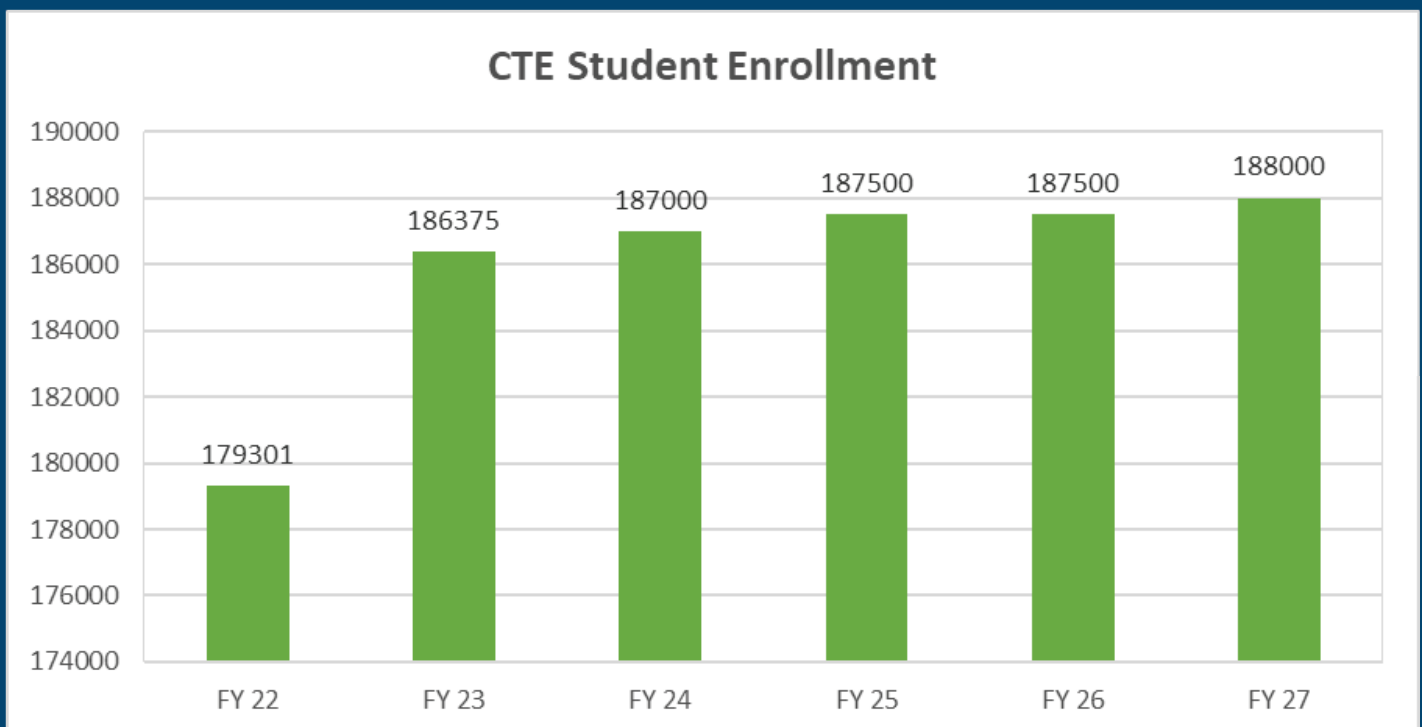
### **LEAs will:**

- Provide new and expanded DESE approved CTE programs.
- Report to DESE and the US Department of Labor the number of students participating in RYA and other work-based learning opportunities.
- Create or maintain updated program information relating to CTE.

### **Statewide CTE Partners will:**

- Support and participate in CTE career exploratory events targeted to middle and high school students such as Health Care Career Day, Manufacturing Day, Build My Future, and the Drone Academy.

## **Historical CTE Trends**



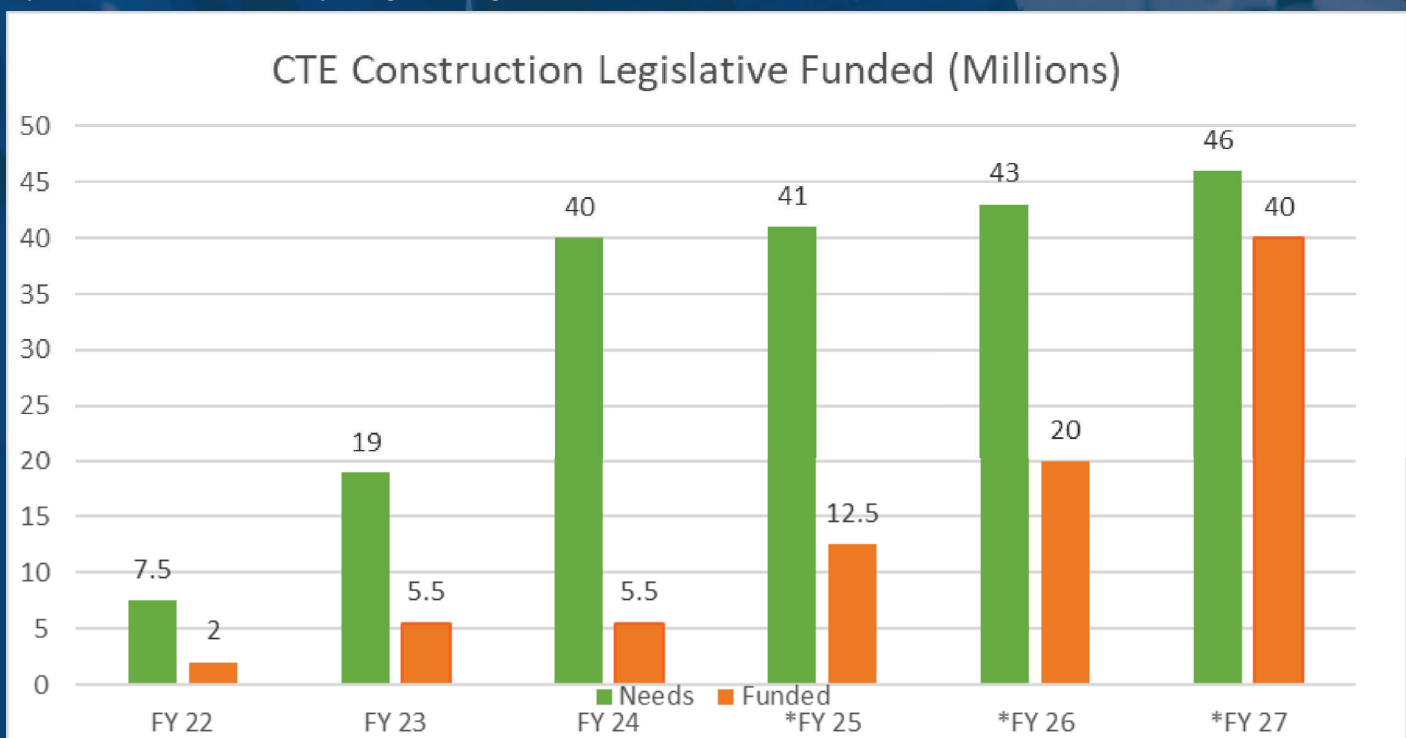


# CTE Priority 3: Business and Financial Operations

Much of Missouri CTE success relies on funding for capital projects and relevant, current industry-related equipment. Providing the necessary training for high-demand occupations requires staying current with and anticipating workforce needs. Meeting those needs requires funding, many times beyond the local level. Missouri has been fortunate for the past three years, receiving additional legislative funding for facility improvements and equipment needs in Missouri's 57 area career centers. Results of needs vs. funding are as follows:

Fiscal Year	Needs	Funded
2022	\$7.5 Million	\$2 Million
2023	\$19 Million	\$5.5 Million
2024	\$40 Million	\$5.5 Million

A survey conducted in the winter of 2022 of area career centers, comprehensive high schools, and postsecondary institutions for projected CTE capital projects spanning a five-year period (FY 2023-27) indicated a need of \$441.5 million (facilities) and \$101.7 million (equipment) for a total of \$543.2 million for CTE expansion/construction, equipment, and CTE program growth.



**Goal: Increase the amount of funding appropriated by the legislature based upon the most recent capital needs survey of area career centers, comprehensive high schools, and community college programs to better serve students by FY 27.**

Strategy	FY 25	FY 26	FY 27
<b><u>Strategy 1</u></b> Identify the annual amount of capital project needs as evidenced by the number of schools applying for grant funding.	Continue to provide information on the need for CTE program enhancements.	Seek input from area career centers on the current state of building operating capacity and areas that need updating or repair.	Update annual capital construction survey.
<b><u>Strategy 2</u></b> Increase the amount of funding for CTE capital projects.	Maintain current budget proposal of \$5.5 million survey - \$5.5 million awarded.	Increase funding request to \$25 million.	Increase funding request to \$25 million.
<b><u>Strategy 3</u></b> Increase the amount of funding for CTE equipment.	Maintain current budget proposal of \$5.5 million (combined with capital projects budget).	Increase funding to request \$5 million.	Increase funding to request \$10 million.
<b><u>Strategy 4</u></b> Calculate and demonstrate the return on investment (ROI) for CTE programs.	Research, develop, and deliver ROI formula.	Develop CTE ROI report for the dissemination of baseline data.	Present CTE ROI report annually to key agencies, general assembly, and stakeholders.



### **DESE and the CTE Advisory Council will:**

- Develop a CTE specific funding request that can be presented to the State Board of Education, the Governor's office, and the state legislature each year.
- Create a CTE ROI formula and develop a Missouri-focused report that outlines the benefits of CTE to students, employers, and the state's workforce.
- Update the CTE community on the progress made in securing increases in funding for CTE programs.
- Survey area career centers, comprehensive high schools, and community colleges regarding their five-year estimated capital project needs.
- Gather data from area career centers the number of eligible students who have applied for enrollment but not considered due to capacity limits.

### **LEAs will:**

- Report to DESE every even-numbered fiscal year the projected five-year financial capital project needs for facilities and equipment.
- Report to DESE annually the number of students not considered for CTE programs due to capacity limits.

### **Statewide CTE Partners will:**

- Advocate for the increase of CTE appropriations from the general assembly.
- Provide input on how businesses and corporations can support additional funding at the local level.



# CTE Priority 4: Teacher Recruitment and Retention

Teacher retention in CTE is particularly challenging in the areas of Skilled Technical Sciences and Health Science, given the salary disparity between the occupational workforce and educator compensation. Missouri's New Teacher Institute and two-year teacher mentoring program assists in retaining CTE instructors. The two-year mentoring program meets the Missouri teacher certification Beginning Teacher Assistance Program certification rule.

**Goal: Increase the number of new CTE teachers remaining in the field at least five years by 2% annually.**

Strategy	FY 25	FY 26	FY 27
<b><u>Strategy 1</u></b> Survey CTE administrators to identify barriers to staff employment and retention.	Create a draft survey.	Administer survey and analyze responses.	Present the findings to the entire CTE Advisory Council and seek feedback for additional strategy implementation.
<b><u>Strategy 2</u></b> Survey new CTE teachers to identify reasons for continuing and/or leaving the CTE teaching field.	Create a draft survey.	Administer survey and analyze responses.	Present the findings to the entire CTE Advisory Council and seek feedback for additional strategy implementation.
<b><u>Strategy 3</u></b> Survey CTE administrators biannually regarding needed changes to certification.	Present and implement recommendations to the State Board of Education.	Communicate survey results regarding needed changes to certification.	Present and implement recommendations to the State Board of Education.



Additional CTE program expansions that may be explored by the CTE Advisory Council to provide CTE opportunities for students while building a pipeline of trained workforce individuals include:

- In the area of Skilled Technical Sciences—added CTE training areas, i.e., heavy equipment operator and heavy truck driving.
- Consider adding Industrial Arts/Technology programs to the Engineering and Technology CTE program area.
- Consider CTE-approved Career Independence programming for special needs students.

**DESE and the CTE Advisory Council will:**

- Develop CTE educator certification rule change recommendations to the State Board of Education.
- Gather input from CTE administrators regarding barriers to CTE teachers' employment and retention.
- Create a "best practices" document of CTE teacher salary, financial incentives, and retention practices.

**LEAs will:**

- Report CTE teacher salaries, incentives, and retention policies.

**Statewide CTE Partners will:**

- Provide input on how businesses and corporations incentivize employees to remain in their employment.





# CTE Advisory Council Members and Committee Assignments

## **Student Achievement**

Dr. Jonathon Walker  
Dr. Sam Duncan  
Angie Gaines  
Anna Hennes  
Sen. Dr. Karla Eslinger  
Dr. Matt Hudson  
Lori Brown

St. Louis Community College  
Superintendent, New Madrid R-1 School District  
VP Academic Affairs, State Technical College  
RWL Program Leader, Kauffman Foundation  
Missouri State Senator  
Executive Dean, Ozarks Technical Community College  
CTE Coordinator, DESE

## **Business and Financial Operations**

Brian Crouse, Chairman  
R.J. Catizon

Jill Huntsman  
Rep. Barbara Phifer  
Rep. Willard Haley  
Dr. Roger Barnes

VP of Education, Missouri Chamber of Commerce  
CEA Business Rep, Mid-America Carpenters Regional Council  
Director, Hillyard Technical Center  
Missouri House of Representatives  
Missouri House of Representatives  
CTE Coordinator, DESE

## **Marketing, Image, and Partnerships**

Erik Montgomery  
Valerie Wilson  
Dan Stroot  
Jill Williams  
Bill Lowery  
Sen. Doug Beck  
Perry Gorrell

President, Fuel Marketing Corp; VP, Costal Energy  
Manager of CTE Enrollment, SSD of St. Louis  
PST Senior Manager of Boeing Defense  
VP of Workforce Initiatives, Missouri Hospital Assn  
Project Executive, Paric  
Missouri State Senator  
Missouri Pathways Manager, DESE

## **Teacher Recruitment and Retention**

Dr. Mike Pantleo, Chairman  
Rebecca Bolen  
Pat Runge

Asst. Prof. of CTE, University of Central Missouri  
Rolla RTC, Health Science Educator  
Director of School Counseling, DESE

## **DESE Staff**

Travis Plume  
Keith Dietzschold  
Dr. Oscar Carter  
Byekwaso Gilbert  
Cindy Shannon

Theresa Struempfl

Shelly Wehmeyer  
Chelsea Wilson

Assistant Commissioner  
Director of Agricultural Education  
Director of Skilled Technical Sciences Education  
Director of Technology and Engineering Education  
Director of Business, Marketing, and Information Technology Education  
Director of Family Consumer Sciences and Human Services Education  
Director of Health Science Education  
Administrative Assistant



